

PEDIATRICS

UNDER THE CHARGE OF

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A Rapid Method for Determination of Water-soluble Vitamine B.—BENMAN (*Jour. Am. Med. Assn.*, January 29, 1921) prepares the synthetic medium in which yeast cells are to be grown with and without the water-soluble vitamine B by adding saccharose 20 gm., ammonium sulphate 3 gm., calcium chloride 0.25 gm., potassium acid phosphate 3 gm., asparagin 3 gm. and magnesium sulphate 0.25 gm., to distilled water, and this solution is made up to 1 liter. This is then sterilized at 10 pounds' pressure and stored in the refrigerator. To 30 cm. of this synthetic medium in a graduate is added 1 c.c. of a Fleischmann yeast-cake measured and cut as 1 by 1 by 1 cm., and the whole is rubbed up with a glass rod until a complete and uniform suspension has been obtained. One-half of the suspension is then placed in the centrifuge tube graduated in tenths of a cubic centimeter and the other half is poured into a 15 c.c. centrifuge tube similarly graduated. To one is added a portion of the vitamine-containing solution, measured out into amounts of from 0.1 to 0.5 c.c. The tubes are then stoppered with non-absorbent cotton and incubated at body temperature. After twenty-four hours the cotton stoppers are withdrawn and the yeast cells thrown down in an ordinary centrifuge for a few minutes. An excess of growth will be found in the tube containing the vitamine and the reading can be compared with the control tube. As the amount of excess growth varies directly with the amount of vitamine a relative determination of this substance in the solution or in permanent uniform suspensions is practical. This relative value is called the vitamine B index, and it is obtained per cubic centimeter of solution by this equation:

$$\text{index} = \frac{1}{\text{amount of vitamine solution}} \times \frac{\text{reading of vitamine tube}}{\text{reading of control tube}}$$

It is necessary first to render the milk protein-free by the method of Osborne and Mendel.

Stools and their Relation to the Feeding in Infants.—GROVER (*Jour. Am. Med. Assn.*, February 5, 1921) recommends that the stools be examined in the napkins in which they are passed. He says that the high protein stool is the result of a small proportion of fat and a high proportion of protein in the food rather than too much protein, and is not a mark of indigestion. Its most characteristic feature is the shiny surface produced when the tongue depressor is passed through it. This shine must be differentiated from the glistening appearance of mucus, and also from the natural moisture of all freshly passed stools due to the water content. This type of stool is dull on the outside where the napkin touches it. The most typical high protein stools are produced from feedings of fat-free milk, undiluted and boiled hard

for three minutes. Besides showing the gloss they are very smooth when pressed out with the tongue depressor. They also appear to be transparent, the nap of the cloth being visible through the thin part of the stool. The stools are a shade of olive green. Soap in the stool is formed from the neutral fat taken by the baby which is broken down into fatty acids which readily unite with bases readily accessible in the intestine. The form of fat when absorbed by the intestine is soap and possibly also fatty acids. The intestine absorbs the most of the fatty acids and soap, but a small proportion passes out as a stool. If the fat in the formula is high and the protein is low there will result a typical soap stool, which is of very light color. They are usually dry and constipated and rarely average more than two a day. When spread out they appear smooth and dull. The granular soap stool differs from the normal soap stool in that the surface is granular when spread out with the stick. The granules are small masses of soap surrounded by mucus. They may be very minute or as large as pin-heads. The large granules are microscopic but are also small fat curds surrounded by mucus. Starches in the stool are readily stained by the use of iodine or Lugol's solution. The particles of undigested starch stain blue or black. Stools containing much fermented starch are loose, acid, light brown, contain mucus and excoriate the buttocks. This type of stool is most likely to be found in babies having indigestion from certain of the proprietary foods. Indigestion of sugar presents no typical stool. They are frequent, very acid, excoriating and very watery. The solid parts are usually full of small air-bubbles formed by the chemical decomposition. These stools are usually green and those from maltose-dextrin preparations are usually brown, while those from sucrose or lactose fermentation are green.

Mental Disorders in Children Following Epidemic Encephalitis.—LEAHY and SANDS (*Jour. Am. Med. Assn.*, February 5, 1921) report six cases varying in age from five to fourteen years. Of these four were boys and two girls. Their mental status was characterized by purposeless, impulsive motor acts, marked irritability, definite attention disorders, distractibility and changing variable mood, inadequate and inconsistent emotional reactions, marked insomnia, and in two cases precocious sexual feelings and intense eroticisms. The writers believed that these mental disorders can best be explained on a purely physical basis. While there was no pathological material upon which their opinion was based, reasoning by analogy from cases which showed similar lesions, such as are seen in true African sleeping sickness, in general paralysis and in subacute infections of the brain tissue, they arrived at this conclusion. The replacement of the destroyed tissue by neuroglia scar tissue acts as a stimulating and undoubtedly as an irritating agent to the rest of the nerve tissue. They further believe that the resolution of the mesodermic inflammatory reaction takes place over a relatively prolonged period and causes considerable irritation to the remaining relatively normal nerve cells. The irritation to the cell bodies results in the function of these cells with the production of the usual effects of the functions of such cells. There are, as a result, both sensory and motor disturbances and marked conduct disorder. The patients may be in the chronic stage of the disease, but this is prob-